

XXX. *A List of the Genera and Species belonging to the Family Cryptoceridæ, with Descriptions of new Species; also a List of the Species of the Genus Echinopla.* By FREDERICK SMITH, Esq., Pres. Entom. Soc.

[Read 4th August, 1862.]

THIS paper contains a complete list of the species belonging to the various genera composing the family *Cryptoceridæ*; reference is made to every work in which figures of the species have appeared. In order to render the list as complete as possible, figures of new species, and also of such as have not been previously published, are now given; the new species are also described. Some of the insects included in the genera *Meranoplus*, *Cataulacus*, and also in *Echinopla*, have been described from unique examples, not in my own collection, and therefore not available for such minute examination as others of which several specimens have been obtained; probably hereafter, when the species occur more plentifully, and more thorough investigations are made, it may then be found necessary to separate some from the genera in which I have placed them. Should any case of this kind occur, I beg those Entomologists, who make such discoveries, to bear in mind, that the circumstance is solely attributable to the fact of their being more fortunate than myself in having at their command more ample materials, which enables them to pursue their investigations further than I could possibly do, possessing only unique specimens, frequently the property of public museums or of private individuals. I feel called upon to make these observations in consequence of some revisions having appeared of certain species of *Formicidæ*, described by myself, by a continental author who has overlooked this circumstance, and whose remarks convey the impression of my having disregarded standard authorities from a love of change, and fallen into error through carelessness of investigation. In 1853 I produced a Monograph of the *Cryptoceridæ*, which was published in the Transactions of this Society; since that time many new species have been discovered, and it has appeared to myself desirable that a new and complete list should be drawn up and published; such a list I have carefully prepared, and I hope it will prove as useful as I have endeavoured to make it.

In my former paper, published in the Transactions of the Society (Vol. II. N. S. pp. 213—228), I included the genus *Echinopla* in the family *Cryptoceridæ*; subsequent investigation has proved the necessity of removing it to the family *Formicidæ*; I have, however, thought it desirable to give a list of the known species, and figures of some, as none have been previously figured in the Society's Transactions.

Fam. FORMICIDÆ, Leach.

Sub-family CRYPTO CERIDÆ, Smith.

Sp. 1. *Cryptocerus atratus*, Latr. Hist. Nat. xiii. 260, tab. cii.
fig. 1 ♀.

Smith, Trans. Ent. Soc. 2nd Ser. ii.
215, pl. xix. fig. 1 ♀; pl. xxi.
fig. 2 ♂.

Hab. Brazil; Cayenne; Panama; Surinam. In
Mus. Brit., &c.

Sp. 2. *Cryptocerus oculatus*, Spin. Mem. Accad. Torino, 2nd
Ser. xiii. 65, 48 ♀.

———— *Æthiops*, Smith, Trans. Ent. Soc. 2nd Ser.
ii. 216, pl. xx. fig. 9 ♀.

Hab. Para; Ega. In Mus. Brit.

Sp. 3. *Cryptocerus serraticeps*, Smith, Cat. Hym. Ins. Form.
p. 188, 3, pl. xi. fig. 7 ♀.

Hab. Ega. In Mus. Brit.

Sp. 4. *Cryptocerus clypeatus*, Fabr. Syst. Piez. 420 ♀.

Smith, Trans. Ent. Soc. 2nd Ser.
ii. 217, pl. xxi. fig. 1 ♀; 2 ♂;
5, 6 ♀.

Perty, Del. An. Art. 136, tab. 27,
f. 4 ♀.

(Pl. XII. fig. 3 ♀.)

Hab. Santarem (Brazil); South America. In Mus.
Brit., &c.

Sp. 5. *Cryptocerus D'Orbignyianus*, Smith, Trans. Ent. Soc. 2nd
Ser. ii. 218, pl. xix. fig.

5 ♀.

Hab. South America. In Coll. Westw.

- Sp. 6. *Cryptocerus quadrimaculatus*, Klug, Ent. Monog. p. 215, 10.
Smith, Trans. Ent. Soc. 2nd Ser. ii. 219, pl. xix. fig. 8 ♀.
(Pl. XII. fig. 2 ♂.)
Hab. Para ; Villa Nova ; Ega. In Mus. Brit., &c.
- Sp. 7. *Cryptocerus quadriguttatus*, Guér. Icon. Règ. Anim. 425 ♂.
Hab. Columbia ; Bolivia ; Brazil.
- Sp. 8. *Cryptocerus argentatus*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 218, pl. xix. fig. 7 ♀.
Hab. Columbia ; Mexico ; Brazil. In Brit. Mus., &c.
- Sp. 9. *Cryptocerus angulatus*, Smith, Cat. Hym. Ins. Form. p. 194, pl. xii. fig. 4 ♂, minor.
(Pl. XII. fig. 1 ♂, major.)
Hab. Tunantins (Brazil). In Brit. Mus., &c.
- Sp. 10. *Cryptocerus elongatus*, Klug, Ent. Monog. 214, 9 ♂.
(Pl. XII. fig. 8 ♂, and Pl. XIII. fig. 6 ♀.)
Hab. Santarem ; Para ; Rio. In Brit. Mus., &c.
- Sp. 11. *Cryptocerus rimosus*, Spin. Mem. Accad. Torino, xiii. 65, 49 ♂.
Hab. Para.
- Sp. 12. *Cryptocerus femoralis*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 219, pl. xx. fig. 3 ♂.
Hab. Brazil ; Columbia. In Mus. Brit., &c.
- Sp. 13. *Cryptocerus cordatus*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 220, pl. xxi. fig. 3 ♂.
Hab. Santarem. In Mus. Brit.
- Sp. 14. *Cryptocerus minutus*, Fabr. Syst. Piez. 425, 5 ♂.
Smith, Cat. Hym. Ins. Form. 190, 14, pl. xii. fig. 3 ♂, minor.
(Pl. XII. fig. 6 ♂, major.)
Hab. Villa Nova ; Rio Janeiro ; Panama. In Mus. Brit., &c.

- Sp. 15. *Cryptocerus pusillus*, Klug, Ent. Monog. 202, 2.
Smith, Trans. Ent. Soc. 2nd Ser.
ii. 220, pl. xx. fig. 8 ♂.
Hab. Santarem ; Para ; Rio Janeiro. In Mus. Brit., &c.
- Sp. 16. *Cryptocerus obtusus*, Smith, Cat. Hym. Ins. Form. p.
191, pl. xii. fig. 12 ♀.
Hab. Santarem. In Mus. Brit.
- Sp. 17. *Cryptocerus Pinellii*, Guér. Icon. Règ. Anim. p. 425.
Hab. Moro-Gueimado (Brazil).
- Sp. 18. *Cryptocerus complanatus*, Guér. Icon. Règ. Anim. 425 ♀.
Hab. Cayenne.
- Sp. 19. *Cryptocerus Pavonii*, Latr. Gen. Crust. et Ins. iv.
132 ♂.
Hab. South America.
- Sp. 20. *Cryptocerus discocephalus*, Smith, Trans. Ent. Soc. 2nd
Ser. ii. 222, pl. xx.
fig. 2 ♀.
Cat. Hym. Ins. Form.
p. 191, pl. xi. fig. 1
♂ ; 2 ♀ major ; 3
♀ minor.
Hab. Villa Nova. In Mus. Brit., &c.
- Sp. 21. *Cryptocerus causticus*, Pohl. and Kollar, Braz. Ins.
p. 17, fig. 12 ♀.
Hab. Brazil.
- Sp. 22. *Cryptocerus elegans*, Smith, Trans. Ent. Soc. 2nd Ser.
ii. 222, pl. xix. fig. 3 ♀.
Hab. Villa Nova ; Ega ; Santarem. In Mus. Brit., &c.
- Sp. 23. *Cryptocerus depressus*, Klug, Ent. Monog. p. 204, 4 ♀.
Hab. Rio Janeiro. In Mus. Berl.
- Sp. 24. *Cryptocerus membranaceus*, Klug, Ent. Monog. p. 208, 7.
Smith, Trans. Ent. Soc.
2nd Ser. ii. 217, pl. xxi.
fig. 4 ♀.
(Pl. XII. fig. 9 ♀.)
Hab. Rio ; Tejuca. In Mus. Brit., &c.

- Sp. 25. *Cryptocerus pallens*, Klug, Ent. Monog. 206 ♀.
Hab. Brazil. In Mus. Berl.
- Sp. 26. *Cryptocerus umbraculatus*, Fabr. Syst. Piez. p. 420 ♀.
Hab. Bahia, S. America. In Mus. Berl.
- Sp. 27. *Cryptocerus unimaculatus*, Smith, Trans. Ent. Soc. 2nd
Ser. ii. 221, pl. xix. fig. 9 ♀.
Hab. Brazil. In Coll. Smith.
- Sp. 28. *Cryptocerus hæmorrhoidalis*, Latr. Hist. Nat. Fourm.
p. 276 ♀.
Hab. St. Domingo.
- Sp. 29. *Cryptocerus araneolus*, Smith, Trans. Ent. Soc. 2nd Ser.
ii. 223, pl. xix. fig. 4 ♀.
Hab. St. Vincent's. In Coll. Smith.
- Sp. 30. *Cryptocerus placidus*, Smith, Journ. Entom. i. 76, 3 ♂.
(Pl. XII. fig. 4 ♂.)
Hab. St. Paul. In Mus. Brit.
- Sp. 31. *Cryptocerus laminatus*, Smith, Journ. Entom. i. 76, 4,
pl. iv. fig. 4 ♀.
Hab. Ega. In Mus. Brit.
- Sp. 32. *Cryptocerus grandinosus*, Smith, Journ. Entom. i. 76, 5,
pl. iv. fig. 5 ♀.
Hab. Ega. In Mus. Brit.
- Sp. 33. *Cryptocerus bimaculatus*, Smith, Journ. Entom. i. 77, 6,
pl. iv. fig. 4 ♀.
Hab. Mexico. In Mus. Brit.

Sp. 34. *Cryptocerus cognatus*.

C. aterrimus, thorace antice posticeque spinoso, elongatus, abdomine flavo-quadrinaculato.

Female.—Length $2\frac{1}{2}$ lines. Head obscurely ferruginous above, black beneath; the mandibles obscure ferruginous; the antennæ fusco-ferruginous, with the scape and the base and apex of the flagellum rufo-testaceous; the tips of the femora, tibiæ, and tarsi ferruginous; the abdomen elongate, half the length of the

insect, deeply emarginate at the base, the lateral angles of its base with a large yellow spot, and a large ovate yellow spot on each side towards the apex of the first segment. The wings ample, fusco-hyaline; the nervures testaceous; the stigma brown. The head and thorax rather strongly punctured; the abdomen very delicately shagreened, and with a few fine scattered punctures. The anterior and posterior angles of the thorax with short spines, the anterior pair acute. (Pl. XIII. fig. 4.)

Hab. Ega, on the Amazon. In Coll. Smith.

This species closely resembles the *C. quadrimaculatus*, but it is considerably smaller; on a comparison with examples of that species the following differences present themselves: the head is of a different colour and much more oblong, the sides being much more straight; the thorax is more elongate, and the metathorax has at its base, on each side, a small angular tooth; its thorax and abdomen are sub-opaque, in *C. 4-maculatus* they are shining.

Genus MERANOPLUS, Smith.

- Sp. 1. *Meranoplus petiolatus*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 224, pl. xx. fig. 7 ♂.

Hab. Brazil. In Coll. Smith.

- Sp. 2. *Meranoplus bicolor*, Guér. Icon. Règ. Anim. 425.
Smith, Trans. Ent. Soc. 2nd Ser. ii. 224, pl. xx. fig. 6 ♂.

Hab. India; Ceylon. In Coll. Smith.

- Sp. 3. *Meranoplus cordatus*, Smith, Proc. Linn. Soc. ii. 82, pl. ii. fig. 5 ♂.

Hab. Borneo (Sarawak). In Coll. Saunders.

- Sp. 4. *Meranoplus mucronatus*, Smith, Proc. Linn. Soc. ii. 82, pl. ii. fig. 6 ♂.

Hab. Borneo. In Coll. Saunders.

- Sp. 5. *Meranoplus castaneus*, Smith, Proc. Linn. Soc. ii. 81, pl. ii. fig. 7 ♀.

Hab. Borneo. In Coll. Saunders.

- Sp. 6. *Meranoplus gracilis*, Smith, Cat. Hym. Ins. Form. p. 194, 6, pl. xii. fig. 7 ♂.

Hab. Brazil. In Mus. Brit.

Sp. 7. *Meranoplus difformis*, Smith, Cat. Hym. Ins. Form. p.
195, pl. xii. fig. 8 ♂.

Hab. Santarem. In Mus. Brit.

Sp. 8. *Meranoplus striatus*, Smith, Journ. Entom. i. 77, 1, pl.
iv. fig. i. ♂.

Hab. St. Paul (Brazil). In Mus. Brit.

Sp. 9. *Meranoplus subpilosus*, Smith, Journ. Entom. i. 78, pl.
iv. fig. 2 ♂.

(Pl. XIII. fig. 7 ♂.)

Hab. St. Paul (Brazil). In Mus. Brit.

Sp. 10. *Meranoplus spinosus*, Smith, Proc. Linn. Soc. iii. 150 ♂.
(Pl. XIII. fig. 5 ♂.)

Hab. Aru. In Coll. Saunders.

Sp. 11. *Meranoplus armatus*.

M. capite thoraceque ferrugineis, abdomine nigro; thorace
quadrato, angulis singulis spina acuta armatis.

Worker. Length $1\frac{1}{2}$ lines.

The head, antennæ, thorax and legs ferruginous, the tarsi and antennæ palest; the head reticulated; the eyes black and prominent. Thorax short, sub-quadrate; the anterior margin slightly rounded, the lateral angles with a stout bifurcate spine, the posterior tooth much smaller than the anterior one; at each of the posterior angles are two stout, equal, slightly curved spines; the thorax is coarsely punctured above. The nodes of the abdomen coarsely rugose, the anterior node with a short acute spine on each side at its base. Abdomen black, smooth and round, slightly emarginate at the base, moderately convex. (Pl. XII. fig. 7 ♂.)

Hab. Sumatra. In Coll. Smith.

This insect, which is somewhat mutilated, was given to me along with other species of ants, by a friend who took a few insects at Celebes and also at Sumatra; all the ants he believed were from the latter locality.

Sp. 12. *Meranoplus pubescens*, (Cryptocerus pubescens,) Smith,
Trans. Ent. Soc. 2nd Ser. ii.
223, pl. xx. fig. 4 ♂.

Hab. Adelaide. In Coll. Smith.

It will be found on reference to my Monograph, page 214, that

I included this insect in the genus *Cryptocerus*, with some hesitation; on a more careful examination, and also an examination of another species from Australia, I have satisfied myself that it belongs to the genus *Meranoplus*:

Sp. 13. *Meranoplus oceanicus*.

M. castaneo-rufus; capite thoraceque longitudinaliter striatis; thorace subquadrato, angulis anticis subspinosi; metathorace quadrispinoso; abdomine cordato.

Worker. Length 2 lines. Chestnut-red; the eyes black and prominent; the head narrowed anteriorly and slightly emarginate, rounded posteriorly; covered with a longitudinal raised striation, the interstices very delicately shagreened. Thorax sub-quadrato, with an irregular longitudinal raised striation, the interstices shagreened; the anterior margin rounded, the angles acute; the lateral margins slightly raised, with a tooth a little beyond the middle; the posterior angles produced into acute spines, and the posterior margin has also two short teeth or spines in the middle. The abdomen heart-shaped, the nodes rugose, the first with a spine on each side, on the thorax, at its insertion; the head, thorax and abdomen with scattered erect hairs. (Pl. XII. fig. 5 ♂.)

Hab. Moreton Bay. In Mus. Brit.

Genus CATAULACUS, Smith.

Sp. 1. *Cataulacus Taprobanæ*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 225, pl. xx. fig. 10 ♂.

Hab. Ceylon. In Coll. Westw.

Sp. 2. *Cataulacus Guineensis*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 225, pl. xx. fig. 5 ♂.

Hab. Tropical Western Africa. In Coll. Westw.

Sp. 3. *Cataulacus parallelus*, Smith, Trans. Ent. Soc. 2nd Ser. ii. 226, pl. xix. fig. 6. ♂.

Hab. Cape of Good Hope. In Coll. Smith.

Sp. 4. *Cataulacus granulatus*, Latr. Hist. Nat. Fourm. p. 275, tab. 12, fig. 75.

Hab. India.

- Sp. 5. *Cataulacus horridus*, Smith, Proc. Linn. Soc. ii. 81, pl. ii.
fig. 3 ♂.
Hab. Borneo. In Coll. Saunders.
- Sp. 6. *Cataulacus reticulatus*, Smith, Proc. Linn. Soc. ii. 81,
pl. ii. fig. 8 ♂.
Hab. Borneo. In Coll. Saunders.
- Sp. 7. *Cataulacus insularis*, Smith, Proc. Linn. Soc. ii. 80, pl. ii.
fig. 4 ♀.
Hab. Borneo. In Coll. Saunders.
- Sp. 8. *Cataulacus setosus*, Smith, Proc. Linn. Soc. v. 114, pl. i.
fig. 7 ♂.
Hab. Bachian; Mysol; Waigiou. In Coll. Saunders.
- Sp. 9. *Cataulacus flagitiosus*, Smith, Proc. Linn. Soc. vi. 49, 1 ♂.
(Pl. XIII. fig. 2 ♂.)
Hab. Celebes. In Coll. Saunders.

GENUS CERATOBASIS, Smith.

- Sp. 1. *Ceratobasis singularis*, Smith, Journ. Entom. i. 78,
pl. iv. figs. 12, 13 ♀.
Meranoplus singularis, Smith, Cat. Hym. Ins. Form. p.
195, pl. xiii. figs. 6—10 ♂.
Hab. Brazil. In Mus. Brit.

Family FORMICIDÆ, Leach.

GENUS ECHINOPLA, Smith.

In the Journal of Proceedings of the Linnæan Society, in 1857, I first characterized the genus *Echinopla*: at that time it appeared to me to possess many characters in common with some of the ants comprising the family *Cryptoceridæ*, particularly that of the first abdominal segment concealing all the following segments. Having had opportunities of carefully examining a number of specimens of the seven species now known, I have satisfied myself that the true situation of the genus *Echinopla* is near to, perhaps following, the genus *Polyrhachis* in the *Formicidæ*. I have thought it desirable to publish a list of all the species at present known to me, and also to give figures of each, in order to facilitate their identification. Some of the species are described from unique examples in the Saundersian Collection; hereafter, when numerous examples may

be obtained, and an opportunity offers further facilities for anatomical investigation, it may be found desirable to separate some of the species, and to form sub-genera for their reception.

Genus *ECHINOPLA*, Smith.

- Sp. 1. *Echinopla melanarctos*, Smith, Proc. Linn. Soc. ii. 79,
 pl. i. fig. 25 ♂.
 (Pl. XIII. fig. 9 ♂.)
 Hab. Borneo. In Mus. Brit., &c.
- Sp. 2. *Echinopla pallipes*, Smith, Proc. Linn. Soc. ii. 80, 2 ♂.
 (Pl. XIII. fig. 3 ♂.)
 Hab. Borneo ; Celebes. In Mus. Brit., &c.
- Sp. 3. *Echinopla striata*, Smith, Proc. Linn. Soc. ii. 80, 3 ♂.
 (Pl. XIII. fig. 8 ♂.)
 Hab. Malacca ; Celebes ; Ceram. In Mus. Brit., &c.
- Sp. 4. *Echinopla prætexta*, Smith, Proc. Linn. Soc. v. 113, pl. i.
 fig. 5 ♂.
 (Pl. XIII. fig. 1 ♂.)
 Hab. Bachián. In Coll. Saunders.
- Sp. 5. *Echinopla dubitata*, Smith, Proc. Linn. Soc. vi. 50 ♂.
 Hab. Celebes. In Coll. Saunders.
- Sp. 6. *Echinopla nitida*, Smith, Proc. Linn. Soc. vii.
 (Pl. XIII. fig. 10 ♂.)
 Hab. Ceram. In Coll. Saunders.
- Sp. 7. *Echinopla deceptor*, Smith, Proc. Linn. Soc. vii.
 Hab. Boroo. In Coll. Saunders.
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